Remarks

Applicant appreciates the Examiner's allowance of claims 12-21.

Claim Rejections under 35 U.S.C. 103

Claims 1-3 and 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai (U.S. Pat. No. 5,642,446).

Examiner states that the optical switch disclosed by Tsai in figures 20-24, figure 17, col. 5 lines 50-60 and col. 18 lines 18-50 includes: a holder; a first stopper; a second stopper; a driver; at least one input collimator aligning with the input fibers and collimating the input light; at least one output collimator aligning with the output fibers and collimating the output light; and a switching element assembled with the holder and having an optical component displaceable between a first and a second positions and a rotating mechanism which rotationally moves the optical component between the first stopper (corresponding to the first position) and the second stopper (corresponding to the second position); whereby, when the switching element is in the first position, the optical component is in optical paths from the input collimators to the output collimators, and light beams from the input fibers transmit sequentially through the input collimators, the optical component, the output collimators, and then to the output fibers; and when the switching element is in the second position, the optical component is out of the optical paths, and light beams from the input fibers transmit through the input collimators, the output collimators, and to the output fibers without being bent or deflected by the optical component, to transmit to different output fibers.

In response to the rejection, applicants now respectfully traverse as follows:

Claim 1 in pertinent part claims **a rotating mechanism which rotationally moves an optical component between a first stopper (corresponding to a first position) and a second stopper (corresponding to a second position).** Referring to FIGS. 5 and 6, in the first position, the optical component assembly 61 is in a downward position, and is abutting against the first stopper 86 (see FIG. 1). Referring to FIGS. 7 to 9, in the second position, the optical component assembly 61 is in an upward position, and one end of the lifting arm 621 which is fixed on the component assembly 61 is abutting against the second stopper 85 (see FIG. 1). The first and second stoppers are at respective opposite ends of the path of movement of the optical component assembly. **Even if the weight of the optical component assembly bends the lifting arm, the optical component assembly is still precisely located in the two preselected positions, because the optical component assembly is stopped by directly abutting against the first stopper or by the end of the lifting arm fixed on the optical component assembly abutting against the second stopper.**

Tsai discloses an optical switch including a movable reflector assembly 520, comprising two reflectors 522 and 524 disposed on a reflector base 526, and a rotation stop 532. The reflector base 526 further includes an axial portion 530, which is opposite to the reflectors 522 and 524 and connected to the rotation stop 532. The rotation stop 532, which has two integral portions 560 and 562, is bounded by two stop walls 547 and 548. Referring to FIGS. 18 to 21 of Tsai, the integral portion 562 of the rotation stop 532 is forced against the stop wall 547 when the reflector assembly 520 is in its first position; and the integral portion 560 of the rotation stop 532 is forced against the stop wall 548 when the reflector assembly 520 is in its second position. Because of their mechanical engagement with the rotation stop 532, the reflectors 522 and 524 rotate along an arcuate path according to movement of the rotation stop 532. Moreover, rotation of the

rotation stop 532 is limited by the stop walls 547 and 548. **Thus, according to Tsai's optical switch, it is the rotation stop that is moving between and directly bounded by the two walls/stoppers, not the two reflectors/optical component being moved between a first stopper and a second stopper. In addition, the weight of the two reflectors may bend the reflector base over time, which results in misalignment of the two reflectors and the input/output fibers.** Tsai's mechanism of positioning the optical component is quite different from that of the present invention and cannot achieve the advantages of the present invention. There is no suggestion or teaching in Tsai that its mechanism could be changed to that of the present invention.

Furthermore, claim 1 in pertinent part claims **when the switching element is in the first position, the optical component is in optical paths from the input collimators to the output collimators, and light beams from the input fibers <u>transmit sequentially through</u> the input collimators, <u>the optical component</u>, the output collimators, and then to the output fibers.** Each light beam transmitted through the optical component is bent along symmetrically opposite paths by the optical component to align with the symmetrically opposite output fibers. Tsai's invention **uses unique arrangements of <u>high quality reflective surfaces</u> and optical fibers. After the light signal leaves the input fiber, it is beamed directly, i.e., <u>it does not pass through a refractive medium</u> (other than air) before entering the output fiber (see col. 2, lines 15-20).** This feature is stated as achieving the purpose of Tsai. Thus, Tsai's invention teaches away from using a refractive optical component.

In summary, a person of ordinary skill in the art could not have derived the optical switch of the present invention from a consideration of Tsai. Thus, claim 1 is submitted to be patentable, and withdrawal of the rejection and allowance of

the claim are respectfully requested.

Claims 2 through 11 directly or indirectly depend from independent claim 1. Therefore, allowance of claims 2 through 11 is also respectfully requested.

In view of the above claim amendment and remarks, the subject application is believed to be in a condition for allowance, and an action to such effect is earnestly solicited.

Respectfully submitted,
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